

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of California-American Water
Company (U210W) for Approval of the Monterey
Peninsula Water Supply Project and Authorization
to Recover All Present and Future Costs in Rates.

Application 12-04-019
(Filed April 23, 2012)

TESTIMONY OF PAUL SCIUTO
ON BEHALF OF
MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY

September 29, 2017

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I. Introduction

A. Name, Occupation, and Address

My name is Paul A. Sciuto. I am the General Manager of the Monterey Regional Water Pollution Control Agency (MRWPCA), which is in the process of changing its name to Monterey One Water. My business address is 5 Harris Court, Building D, Monterey, California 93940.

I previously submitted opening testimony in this proceeding on January 22, 2016, in which I provided my professional qualifications and discussed MRWPCA's involvement in the Pure Water Monterey Groundwater Replenishment Project (PWM Project, also referred to as the GWR Project in other documents). I also submitted rebuttal testimony on March 22, 2016.

B. Purpose of This Testimony

This testimony is in response to the Assigned Commissioner and Administrative Law Judge's Ruling Setting Issues and Schedule for Further Evidentiary Hearings and Requiring Submission of Supporting Documents, dated August 28, 2017 (the August 28 Ruling). The August 28 Ruling asked about the ability to expand the PWM Project and produce more than 3,500 acre feet of purified recycled water annually for California American Water Company's (CalAm's) Monterey District service area. Specifically, the August 28 Ruling requested testimony on the following issue:

2. *Supply: updated estimates and analysis of supply, including but not limited to:*
- a. *Plans for expansion of the Pure Water Monterey (PWM) project, if any*
 - b. *Can expansion of the PWM project provide water to applicant in excess of 3,500 acre-feet per year, in what amounts, and at what cost?*
 - c. *Is water available for purchase by applicant from Marina Coast Water District, in what amounts, and at what cost?*¹

This testimony addresses Issue 2(a) and 2(b) above, and it provides a partial response to Issue 2(c) limited to MRWPCA's knowledge about that issue. My testimony does not respond to any of the other eight issues identified in the August 28 Ruling.

The information contained in this testimony about new theoretical scenarios for expansion (namely, Scenarios A, B, and C below) is hypothetical only and was developed for the sole

¹ August 28 Ruling at 3-4.

1 purpose of responding to the Commission's request in the August 28 Ruling. These scenarios are
2 speculative; at this time, MRWPCA has no plans or proposals to expand the PWM Project
3 beyond the current plans for expansion to 5 mgd (million gallons per day) discussed in Section III
4 below.

5 **II. Current Status of the Approved Pure Water Monterey Project**

6 The PWM Project is fully approved, under construction, and set to go into operation to
7 meet critical deadlines under the State Water Resources Control Board (SWRCB) Cease and
8 Desist Order.² It has acquired all of the necessary permits for construction and water rights, and it
9 is not facing any litigation. Construction on the approved PWM Project commenced on May 1,
10 2017. Construction is anticipated to be completed in 2019, which would meet the injection and
11 delivery dates in the Water Purchase Agreement. The Advanced Water Purification Facility
12 (AWPF) is being built at MRWPCA's Regional Treatment Plant site. It will operate at a
13 maximum capacity of 4 mgd and produce 3,500 acre feet per year (AFY) of purified recycled
14 water, with an additional 200 AFY during the non-irrigation months of most years for a drought
15 reserve. The PWM Project will also provide additional treated wastewater flows as influent to the
16 Salinas Valley Reclamation Plant (SVRP) at the Regional Treatment Plant for further treatment
17 and delivery to the Castroville Seawater Intrusion Project (CSIP). In addition, MRWPCA has a
18 signed Power Purchase Agreement with the Monterey Regional Waste Management District to
19 purchase and utilize all available electricity generated by landfill gas.³

20 **III. Issue 2(a): Current Plans for Expansion of the PWM Project**

21 Issue 2(a) of the August 28 Ruling asks for testimony on any plans to expand the PWM
22 Project. MRWPCA is currently considering (and evaluating the environmental impacts of)
23 expanding the PWM Project to increase the peak output of purified recycled water from 4 mgd to
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25 ² See SWRCB Orders WR 2009-0060 and WR 2016-0016.

26 ³ This Power Purchase Agreement was discussed in my rebuttal testimony submitted
27 March 22, 2016; however, it has since been executed, and the final executed version is attached as
28 Appendix 1. As noted previously, this is significant to the CalAm desalination project because
this power supply will not be available.

1 5 mgd. This proposed expansion of the PWM Project would be achieved by utilizing
2 redundancies built into the approved 4 mgd PWM Project. This current plan for expansion would
3 enable delivery of 600 AFY of purified recycled water to Marina Coast Water District (MCWD)
4 for MCWD customers to use for urban landscape irrigation. The source water would come
5 entirely from MCWD's rights to the return of its municipal wastewater. (See Appendix 2.) The
6 proposed expansion, however, would not result in any potential additional yield for use by
7 CalAm, and it would not impact CalAm's purchase price for water.

8 This proposed expansion necessitates review pursuant to the California Environmental
9 Quality Act (CEQA) and other requirements, which are underway. However, it would not require
10 additional groundwater modeling, or new or modified facilities. If approved, the proposed
11 expansion would be implemented within two years (by August 2019), in parallel with
12 construction of the approved PWM Project. There are currently no other proposals for expansion
13 of the PWM Project.

14 **IV. Issue 2(b): Hypothetical Expansion Scenarios for the PWM Project**

15 Issue 2(b) of the August 28 Ruling asks for testimony regarding whether expansion of the
16 PWM Project can provide water to CalAm in excess of 3,500 AFY, in what amounts, and at what
17 cost. In response to the August 28 Ruling, MRWPCA has evaluated its ability to potentially
18 provide more than 3,500 AFY of product water from the PWM Project to CalAm.

19 To do this, MRWPCA developed hypothetical concepts and assumptions for a broad and
20 varied set of potential expanded plant sizes for the PWM Project. MRWPCA performed a
21 concept-level analysis of logical increased plant sizes, based on various factors including source-
22 water requirements, design and sizing constraints, cost effectiveness, and yields.⁴

25 ⁴ In theory, there are many potential scenarios for expanding the PWM Project; however,
26 the time constraints for preparing this testimony did not allow for a detailed analysis of every
27 possible expansion scenario and capacity. Rather, the three scenarios ultimately selected and
28 analyzed below are intended to provide the Commission and interested stakeholders with a range
of scenarios for potential expansion opportunities.

1 As a result, and for purposes of this testimony only, MRWPCA has now conducted an
2 analysis of three new hypothetical future expansion scenarios which potentially could produce
3 additional water for CalAm's purchase:

- 4 • Scenario A - AWPf capacity of 5 mgd
- 5 • Scenario B - AWPf capacity of 6.5 mgd
- 6 • Scenario C - AWPf capacity of 10 mgd

7 Each of these three scenarios is described below. The assumptions made in the analysis of
8 Scenarios A, B, and C are contained in Appendix 2.

9 **A. Scenario A**

10 **1. Overview and Yield**

11 Scenario A consists of increasing the production from the 5 mgd AWPf to provide
12 CalAm with the remaining yield available by utilizing all remaining redundant capacity in the
13 current design of the AWPf. Like the current plan for expansion described above in Section III,
14 MCWD would still receive 600 AFY, but Scenario A would use more redundant capacity than
15 that proposed expansion (including at times, all of the redundant capacity remaining), to provide
16 excess production capacity to CalAm. The potential additional yield for use by CalAm under
17 Scenario A would be approximately 650 AFY for a total yield of 4,150 AFY. (See Appendix 2.)

18 **2. New or Modified Physical Facilities**

19 Scenario A would require one more deep injection well than is currently being built for
20 the PWM Project (for a total of three) and associated site work, pipelines, driveways, drainage
21 basins, monitoring wells, and electrical instrumentation and controls. No other new or modified
22 physical facilities would be needed.

23 **3. Source Water**

24 In September 2017, both the MRWPCA and the Monterey County Water Resources
25 Agency (MCWRA) boards of directors conceptually approved the use of excess winter
26 wastewater, via a proposed amendment to the Amended and Restated Water Recycling
27 Agreement between MRWPCA and MCWRA, dated November 3, 2015 (2015 Amended and
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Restated Water Recycling Agreement).⁵ Through a future amendment, MCWRA could choose to allocate priority rights for MRWPCA to use an additional 400 acre-feet per month of winter flows each year from October through March. With these source waters, MRWPCA and MCWRA would have all of the source water needed for the Scenario A identified yield. In this case, additional yield of approximately 90 AFY (for a total additional yield for CalAm of 740 AFY) would be available by scheduling maintenance during April and September, thereby reducing AWPf downtime in months with excess source water and plant treatment capacity, such as October through March. (See Appendix 2.)

4. Pre-Operational Requirements

Scenario A would require additional planning and environmental, design, and construction tasks, including but not limited to the following:

- Secure financing needed for the planning, environmental review, design, and construction.
- Revise or amend the 2015 Amended and Restated Water Recycling Agreement.
- Scope, prepare, and approve a CEQA document.⁶
- Comply with any necessary federal environmental review requirements.
- Amend the Division of Drinking Water Engineering Report.
- Amend the waste discharge requirements/water recycling requirements (WDR/WRR) from the Regional Water Quality Control Board (RWQCB) for injection of additional purified recycled water into the Seaside Groundwater Basin.

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⁵ See <https://monterey.legistar.com/MeetingDetail.aspx?ID=563612&GUID=15B2AB03-5D4E-4AAC-9A8F-C8C37069E0A2&Options=info&Search=> .

⁶ At this time, it is premature to determine whether an addendum to the PWM Project Environmental Impact Report (EIR) is sufficient or whether a supplemental EIR would be required. Here, MRWPCA assumes that an addendum would be used to calculate the cost and timeframe for Scenario A. However, in the event that a Supplemental EIR would be required, there would be additional time and costs associated with Scenario A.

- Amend the National Pollutant Discharge Elimination System (NPDES) permit as needed with the RWQCB (including Monterey Bay National Marine Sanctuary (MBNMS) review of NPDES permit and authorization process).
- Secure local and state construction permits and easements, if any.
- Construct and perform pre-operational testing.

5. Estimated Schedule

It may be possible to implement Scenario A within two years (by the end of 2019), in parallel with construction of the approved PWM Project—provided that adequate funding is made available to commence planning, environmental, and engineering design by the first quarter of 2018. Figure 1 provides a concept-level critical path schedule. Like the approved PWM Project planning and design, several items require third-party actions and are not within MRWPCA’s control. Particularly critical to successful planning and implementation are the ability to identify funding for initial planning, environmental, and design and to reach revised agreements with project participants and partners, as well as the timely regulatory review and approvals needed for these theoretical expansion scenarios.

6. Estimated Costs

The preliminary estimated cost to CalAm for Scenario A water (expanded 5 mgd capacity) is \$1,897/AF. (See Table 1 and Appendix 2.)

B. Scenario B

1. Overview and Yield

Under Scenario B, the PWM Project’s AWPf would be expanded to a 6.5 mgd capacity, which is the largest the AWPf could be expanded yet still fit within the approved AWPf building footprint. Figure 2 provides an overview of new or modified facilities needed for Scenario B. Figure 3 illustrates how the site plan can accommodate future additional equipment or processes under Scenario B. The additional yield capable for use by CalAm under Scenario B would be approximately 2,250 AFY for a total yield of 5,750 AFY. See Appendix 2.

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1 **2. New or Modified Physical Facilities**

2 Scenario B would require lining the three Salinas Treatment Facility ponds with high
3 density polyethylene to minimize percolation of Salinas Agricultural (or “Ag”) Wash Water and
4 urban storm water, and to enable recovering more water from Salinas to the Regional Treatment
5 Plant during the summer months. Pond lining is estimated to provide the additional flows into the
6 Regional Treatment Plant needed for Scenario B.

7 Scenario B would require additional microfiltration, reverse osmosis, ozone generator,
8 injectors, ultra-violet unit, additional regulatory work, and associated costs. It would also require
9 replacement of existing 14-inch pipeline with new 24-inch pipelines between the AWPf and the
10 injection sites. This would allow for increased flow of purified recycled water. Figure 4 shows the
11 general location of the new pipeline segments for Scenario B. Scenario B would further require
12 two more deep injection wells than are currently being built for the PWM Project (for a total of
13 four), three more monitoring well clusters (for a total of seven), and associated site work,
14 pipelines, driveways, drainage basins, monitoring wells, and electrical instrumentation and
15 controls.

16 **3. Source Water**

17 The source water flows needed for Scenario B would come from (1) MRWPCA’s water
18 rights in the 2015 Amended and Restated Water Recycling Agreement (including conceptually
19 approved use of excess municipal wastewater flows in the amendment proposed at the September
20 2017 board meetings) and (2) additional Salinas Ag Wash Water and storm water return flows
21 made available by lining the three ponds at the Salinas Industrial Wastewater Treatment Facility.
22 (See Appendix 2.)

23 **4. Pre-Operational Requirements**

24 This analysis assumes that Scenario B would require the following additional planning
25 and environmental, design, and construction tasks. However, the specifics of this scenario have
26 not been sufficiently delineated to define these requirements with certainty:

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- Secure financing needed for the planning, environmental review, design, and construction.
- Conduct site surveys, geotechnical, source water quality analysis, ocean water quality, and hydrogeologic modeling.
- Revise or amend the 2015 Amended and Restated Recycling Agreement.
- Scope, prepare, and approve a CEQA document.⁷
- Comply with any necessary federal environmental review requirements.
- Amend the Division of Drinking Water Engineering Report.
- Amend the WDR/WRR from the RWQCB for injection of additional purified recycled water into the Seaside Groundwater Basin.
- Amend the NPDES permit with the RWQCB (including MBNMS review of the NPDES permit and authorization process) for additional reverse osmosis by-product (concentrate) discharge to the ocean.
- Secure all necessary construction permits and easements.
- Complete the design and prepare construction contract document.
- Construct new and modified facilities and conduct pre-operational testing.

5. Estimated Schedule

It may be possible to implement Scenario B by the end of 2020—provided that adequate funding is made available to commence planning, environmental, and engineering design by the first quarter of 2018. Figure 1 provides a concept-level critical path schedule. Several items require third-party actions and are not within MRWPCA’s control. Particularly critical to successful planning and implementation are the ability to identify funding for initial planning, environmental, and design and to reach revised agreements with project participants and partners, as well as the timely regulatory review and approvals needed for these theoretical expansion scenarios.

⁷ For purposes of this analysis, with respect to timeline and cost, MRWPCA has assumed the preparation of a Supplemental EIR. However, it is premature for MRWPCA to make a determination on the level of CEQA analysis that would be needed.

1 **6. Estimated Costs**

2 The preliminary estimated cost to CalAm for Scenario B water (6.5 mgd capacity) is
3 \$1,858/AF. (See Table 1 and Appendix 2.)

4 **C. Scenario C**

5 **1. Overview and Yield**

6 Scenario C would expand the AWPf capacity to 10 mgd, which is as large as the AWPf
7 could be constructed within the existing land available at the Regional Treatment Plant. (See
8 Figure 5.) Scenario C would require an estimated four more deep injection wells than are
9 currently being built for the PWM Project (for a total of six). It would therefore require
10 identification and analysis of an additional injection site within the Seaside Groundwater Basin.
11 The potential additional yield for use by CalAm under Scenario C is estimated at 3,570 AFY for a
12 total yield of 7,070 AFY.

13 **2. New or Modified Facilities**

14 As with Scenario B, Scenario C would require the lining of up to three Salinas Treatment
15 Facility ponds. Scenario C would also require additional microfiltration, reverse osmosis, ozone
16 generator, injectors, ultra-violet unit, regulatory work, and associated costs.

17 The existing building footprint would not accommodate the new equipment and facilities
18 needed for the Scenario C AWPf expansion. However, the remainder of the available vacant,
19 undeveloped land at the Regional Treatment Plant could accommodate the required treatment and
20 product water conveyance facilities. Figure 5 shows conceptually where the additional facilities
21 could be located at the Regional Treatment Plant site to accommodate expanding the AWPf to 10
22 mgd. Scenario C would also require:

- 23 • replacement of existing pipelines with larger pipelines;
- 24 • four more deep injection wells (for a total of six);
- 25 • one more vadose zone (shallow) well (for a total of two);
- 26 • up to four more monitoring well clusters (for a total of eight); and

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- associated site work, pipelines, driveways, drainage basins, monitoring wells, and electrical instrumentation and controls.

3. Source Water

Our analysis reflected that the availability of source waters to operate at the full capacity during the months of July through October is the limiting factor for Scenario C. (See Appendix 2.) Scenario C may necessitate increasing the size of the operational or drought reserves to provide operational flexibility to meet all recycled water demands. Additional source waters could be pursued from the following:

- remaining “new source waters” that are not needed to meet required influent water requirements for the existing PWM Project and SVRP (potentially requiring additional amendments to the 2015 Amended and Restated Water Recycling Agreement);
- additional urban storm water runoff from member entities;
- excess/unused water rights of MCWD in the event that irrigation demands are lower than projected by MCWD for its customers;
- currently unknown seasonal storage opportunities; and
- potential new municipal wastewater and/or urban storm water flows outside of MRWPCA’s service area (in the event that the service area expands).⁸

4. Pre-Operational Requirements

Scenario C would require additional planning and environmental, design, and construction tasks, including but not limited to the following:

- Secure financing needed for the planning, environmental review, design, and construction.
- Conduct site surveys, geotechnical, source water quality analysis, and hydrogeologic modeling.

⁸ MRWPCA is currently pursuing a sphere of influence amendment and service area expansion through the Monterey County Local Agency Formation Commission.

- Revise or amend the 2015 Amended and Restated Recycling Agreement.
- Scope, prepare, and approve a CEQA document.⁹
- Comply with any necessary federal environmental review requirements.
- Amend the Division of Drinking Water Engineering Report.
- Amend the WDR/WRR from the RWQCB for injection of additional purified recycled water into the Seaside Groundwater Basin.
- Amend the NPDES permit with the RWQCB (including MBNMS review of NPDES permit and authorization process) for additional reverse osmosis by-product (concentrate) discharge to the ocean.
- Identify and secure adequate source water to maximize the yield, including potentially pursuing additional water rights to surface waters in the region.
- Secure all construction permits, rights of way, and easements, including for replacing product water conveyance pipeline, new well sites, backwash basin, and electrical buildings.
- Complete the design and prepare construction contract document.
- Construct new and modified facilities and conduct pre-operational testing.

5. Estimated Schedule

It may be possible to implement Scenario C by the end of 2022; however, this timeframe is less certain than Scenarios A and B due to the unknown nature of constraints to implement Scenario C. Figure 1 provides a concept-level critical path schedule. Several items require third-party actions and are not within MRWPCA's control. Particularly critical to successful planning and implementation are the ability to identify funding for initial planning, environmental, and design and to reach revised agreements with project participants and partners, as well as the timely regulatory review and approvals needed for these theoretical expansion scenarios.

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⁹ For purposes of this analysis, with respect to timeline and cost, MRWPCA has assumed the preparation of a Supplemental EIR. However, it is premature for MRWPCA to make a determination on the level of CEQA analysis that would be needed.

6. Estimated Costs

The preliminary estimated cost to CalAm for Scenario C (10 mgd capacity) water is \$2,335/AF. (See Table 1 and Appendix 2.)

D. Summary Table for Scenarios A, B, and C

Table 1
Summary of PWM Project Expansion Scenarios

	Scenario A	Scenario B	Scenario C
AWPF rated capacity (approved PWM Project = 4 mgd)	5 mgd	6.5 mgd	10 mgd
Approved PWM project yield to CalAm	3,500 AFY	3,500 AFY	3,500 AFY
Incremental yield above approved PWM Project for CalAm	650 AFY	2,250 AFY	3,570 AFY
Estimated total yield for CalAm	4,150 AFY	5,750 AFY	7,070 AFY
Incremental capital cost above the approved PWM Project	\$6.9 million	\$51.6 million	\$132.9 million
Annual operations and maintenance costs (Approved plus Expansion Scenario)	\$5.0 million	\$6.2 million	\$8.4 million
Cost of water (\$/AF) ⁽¹⁾	\$1,897	\$1,858	\$2,335
Estimated construction completion date (see Note 2)	4th Quarter of 2019	4th Quarter of 2020	4th Quarter of 2022

Note 1: Loan term of 10 years for Scenario A; and a 40 year term for Scenarios B and C. Assumes a 3% interest rate on revenue bonds, interest only internal loan to support the debt reserve requirement for the State Revolving Fund Loan, and supplemented replacement and renewal costs.

Note 2. The completion dates are based on concept-level critical path analysis that are affected by timing of MRWPCA receiving funding, financing, local partner agency agreements, and state and federal actions/approvals.

1 **V. Issue 2(c): Water Available for Purchase by CalAm from MCWD**

2 Issue 2(c) in the August 28 Ruling asks for testimony regarding whether water is available
3 for purchase by CalAm from MCWD, in what amounts, and at what cost. MRWPCA is pursuing
4 its current plan for expansion discussed in Section III above, which involves changing its
5 Engineering Report, preparing an addendum to the PWM Project's EIR, and preparing to request
6 an NPDES amendment to allow MRWPCA to produce up to 4,300 AFY from the AWPf. This
7 amount of total product water consists of 3,500 AFY for purchase by CalAm, 200 AFY for the
8 drought reserve, and 600 AFY for MCWD. MCWD, with MRWPCA and MPWMD participation,
9 theoretically could make the 600 AFY available to CalAm for injection into the Seaside
10 Groundwater Basin to meet the CDO requirements. However, this would require additional
11 analysis and regulatory approvals.

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13 This concludes my testimony at this time.
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